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ABSTRACT

This introduction to the application of Total Quality Management (TQM) on college campuses first reviews the development and application of TQM principles in Japanese industries and recent implementation in industries and the Federal Government in the United States. Twelve principles of TQM are then identified: (1) a focus on quality; (2) customer-driven; (3) continuous improvement; (4) making processes work better; (5) extending the mindset; (6) the discipline of information; (7) elimination of rework; (8) teamwork; (9) empowerment of people; (10) training and recognition; (11) vision; and (12) leadership. Common objections to applying TQM principles in higher education are then identified and answered. These include: resistance to seeing students as customers; resistance to the technical language of TQM; inability to see relevance of a business approach to faculty and students; and dismissal of TQM as just good management or just another fad. It is noted that early collegiate adopters of TQM appear to be either prominent research universities or community colleges. Examples of implementation strategies at a variety of educational institutions are then offered. (DB)

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TQM REACHES THE ACADEMY

by Ted Marchese

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Total Quality Management . . . an American set of ideas, engine behind the Japanese economic miracle, agent for the dramatic turnabouts at Ford and Motorola . . . suddenly it's at work in more than half the Fortune 1000 firms . . . it's the "preferred management style" of the federal government . . . you'll find it in hotels, city government, your local hospital . . . *it's in the air* . . . can the academy be next?

In fact, TQM has *already* arrived in higher education, in dozens of institutions, notably research universities and community colleges. TQM's collegiate practitioners, their zeal and worries on full display, already have networks in place and a literature at hand; their quality-improvement message dominated last spring's AACSB conference of business schools and this month's ABET meeting of engineering educators; next April 5-8, TQM debuts as a major theme of AAHE's National Conference on Higher Education in Chicago.

What's going on here? How relevant can TQM be to the special work of a college or university? Are we about to be shelled again by the latest fad in corporate management?

To get answers to these questions, last July I travelled to Los Angeles for the Second Annual Symposium on the Role of Academia in National Competitiveness and Total Quality Management, hosted by the University of Southern California. A hundred colleges had representatives among the 300 people on hand. Afterwards I met with two dozen of TQM's lead practitioners in higher education; since then, through interviews and document collection, I've pieced together a picture of the movement's first days on campus. This is what I found.

The TQM Story

The saga is triumphalist: W. Edwards Deming, an American statistician whose ideas about quality find little response at home, lectures in 1950 to Japan. He excoriates his hosts for their cheap, shoddy goods; he tells them that an emphasis on quality will reap lasting benefits in market share and profitability; he lays out principles — eventually fourteen in number — for making quality a "strategic advantage." They listen to him. They listen also, in 1954, to Joseph Juran ("management for quality"); they devour Armand Feigenbaum's 1951 classic, *Total Quality Control*, and later the writing of Philip Crosby (*Quality Is Free*). They struggle, adapt, develop their own gurus (Ishikawa, Imai), pursue the quality ideal relentlessly. . . . The rest, as they say, is history.

In the early- and mid-1980s, hard-pressed American firms take up the message: at Motorola (1982) and Ford (1984), quality becomes "everybody's job" and "Job 1." Soon Xerox, Federal Express, IBM, Westinghouse, Disney, Corning, Hewlett-Packard, and the Hospital Corporation of America are on board; the books, workshops, and consultants multiply; the U.S. Navy coins the phrase "Total Quality Management." In 1987, Congress sets up a Malcolm Baldrige National Quality Award; its seven criteria become a consensus statement of TQM values. In 1988, the Department of Defense mandates TQM for itself and all contractors; a Federal Quality Institute starts to implement TQM across all departments and agencies. Surveys show that buyers — nine of ten in 1990 versus three in ten in 1980 — now place a first value on quality (above price and styling); studies demonstrate that quality-oriented firms in fact do better in market share and profits.

In banking and airlines, in manu-

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chips to pet food, the word is out: Consumers value *products* that work and last, *service* that's prompt, courteous, and dependable, and *TQM* is the way to deliver it.

With all that, I wondered aloud in Los Angeles why *all* firms hadn't given themselves over totally to the concept. "They haven't," an executive from McDonnell Douglas told me, "because not many companies have felt as hard-pressed as Ford and Motorola did ten years ago. Firms claim to be into TQM, but their implementation is spotty. It's too great a change to make without a big need at your backside."

What Is It?

What is TQM, this "too great a change"? At one level, it's an approach to management and a set of tools, a coalescing of new and old ideas — from systems thinking and statistical process control, from theories of human behavior, leadership, and planning, plus lessons from earlier, less-than-successful attempts at quality improvement (such as quality circles) — all these brought together in a new orthodoxy.

But at another level, and looking at TQM as a phenomenon, it is a call to leadership for the reform of American enterprise. Its advocates want more than a change in management practice; they want an entirely new organization, one whose culture is quality-driven, customer-oriented, marked by teamwork, and avid about improvement . . . "corporate revolution" and "paradigm shift" are the words one hears. Armand Feigenbaum, now an international consultant, told the Los Angeles conference that American corporate philosophy has been to "make it quick and cheaper, finance it cleverly, and sell it hard. The value of 'making it better' was left out. Firms have to march to an entirely new drumbeat: quality."

From among the many strands of thought and prior experience feeding into TQM, I've teased out a dozen themes that seem at its core.

1. ***A focus on quality.*** The alpha and omega of TQM is its singular focus on quality as the defining characteristic of an organization. Quality in this view is not just an attribute of products or services; it is a mindset, the soul of the company itself, an all-pervasive drive of such intensity that it defines the corporate culture. Just as geneticist Barbara McClintock's breakthroughs came when she was able to "think like corn," TQM enjoins managers to "imbibe" quality; the corporation that lives for quality, that takes quality as its strategic advantage, is promised long-run gains in market share and return on investment.

2. ***Customer-driven.*** What is quality? To Juran, it's "fitness for use" by the consumer; to Deming, it's that which "surpasses customer needs and expectations." In TQM companies, a keen sense of customer needs governs all activities. The cardinal rule is to identify explicitly who your customers are, know their needs systematically, and commit to meeting those needs. Why? Because in a competitive environment the customer — not executives, engineers, or inspectors — defines quality. If you don't satisfy the customer, someone else will.

3. ***Continuous improvement.*** An American adage says, "If it ain't broke, don't fix it." TQM responds, "Wrong!" Customers, markets, technologies change every day; what's good enough now will be suicide tomorrow. Deming preaches "constancy of purpose" on behalf of continuous adaptation and improvement; he and Juran describe quality as a "journey." Education undersecretary David Kearns, former Xerox CEO and a quality champion, proclaims, "In the race for quality, there is no finish line."

The Baldrige Award

Secretary of Commerce Malcolm Baldrige, a quality advocate, died in a rodeo accident in 1987. Shortly thereafter, Congress authorized a "National Quality Award" in his name, a public-private endeavor administered from the Commerce Department. A distinguished group of quality experts was empaneled to write criteria for the award; the panel's ultimate scheme, derived from TQM, quickly became the accepted template for judging corporate quality-improvement efforts.

The Baldrige criteria categories and their relative values (on a 1,000-point scale) are as follows:

Leadership. The senior management's success in creating and sustaining a quality culture. (100 points)

Information and analysis. The effectiveness of the company's collection and analysis of information for quality improvement and planning. (70)

Planning. The effectiveness of integrating quality requirements into the company's business plans. (60)

Human resource utilization. The success of the company's efforts to utilize the full potential of the workforce for quality. (150)

Quality assurance. The effectiveness of the company's systems for ensuring quality control of all operations. (140)

Quality results. The company's results in quality achievement and quality improvement, demonstrated through quantitative measures. (180)

Customer satisfaction. The effectiveness of the company's systems to determine customer requirements and demonstrated success in meeting them. (300)

The Baldrige application is detailed: The seven categories are broken down into thirty-two subcategories with ninety-nine "areas to address." The award's key values are self-described as customer-driven quality, leadership, continuous improvement, fast response, actions based on facts, and participation by all employees. The criteria ask about results but especially focus on the conditions and processes that lead to them.

The guidelines themselves constitute a self-study exercise for applicants, a corporate "examination" (with an accompanying "scoring system") in quality commitment; firms that apply get feedback from the Baldrige judging panels. Because of these diagnostic features (and low entry fees), many companies apply just for the self-study exercise . . . Ford, Motorola, and IBM even make their suppliers go through the process. Last year, 200,000 copies of the guidelines were distributed; in a poll, 86 percent of business executives claimed to know the criteria; 6 percent of all firms actually applied. This year's winners were announced October 29th from the White House.

In the September/October *Change*, SHEEO director James Mingle proposed that regional accrediting bodies mount a Baldrige Award competition for higher education. His colleague Peter Ewell, of NCHEMS, doubts the idea would work just now ("It assumes a process within colleges that isn't there yet."); but the idea is alive, with several parties in the country now trying to cook up "higher-ed versions" of the criteria. At the Los Angeles conference, Baldrige director Curt Reimann acknowledged that "if such an award could make a contribution, and educators expressed interest, the Secretary would welcome the suggestion."

4. ***Making processes work better.*** Every organization is a network of processes. These range from the "single-purpose" (discharging a patient from a hospital) to the "cross-functional" (Federal Express's hub-and-spoke delivery system). The aim is to identify those processes; enable the people who work in them to understand that work in relation to customer needs (Are we doing the right thing? How well?); and set in motion, through problem-solving teams, process improvements.

5. ***Extending the mindset.*** In the old paradigm, attention to quality began and ended on the shop floor; it was a matter to be "controlled" or "inspected in." In the new, quality concerns reach in all directions. An "absence of defects" isn't enough; goods are followed "out the door," where their quality is judged by how well they fit or exceed customer expectations in actual use. Quality, too, is a function of good, up-front product and process design. And it reaches backward from the shop floor: No longer will it do for automakers to say, "We know our cars aren't very good, but our lowest-bid suppliers sent us so-so goods." With quality precedent to price, TQM companies attempt to develop stable relations with a smaller set of suppliers who agree to be partners in the quality-improvement process.

6. ***The discipline of information.*** TQM people always want to see the data, and they want it to be public data, up on the shop or office wall. If you're serious about improving quality, they say, everybody has to know how they're doing. Customers aren't just bowed to; they're systematically surveyed, interviewed, poked, prodded, and begged for suggestions. Process-improvement teams are taught to track meticulously every fault, complaint, breakdown, accident, or shortage that comes their way; "Every process," Wisconsin's George Box teaches, "generates the data to improve it." A variety of statistical tools — ingenious diagrams, charts, matrices, graphs, and checksheets — are deployed in what the Japanese call *Kaizen* (continuous improvement) methods of process control.

7. ***Eliminate rework.*** An aim of all this attention to work processes is to ferret out the "scrap, waste, and complexity" (Deming) from a system . . . simplify, standardize, get it right the first time. The time spent fixing earlier mistakes (rework), in useless work that has to be done over (scrap), and in extra steps that add no value to a product or service (complexity) can equal 20 percent of all costs, say "findings" in the Baldrige legislation. Service organizations can have an even greater problem: Crosby concludes they spend "35 percent or more of their operating costs doing things wrong and then doing them over."

8. ***Teamwork.*** From top management to the shop floor, within units and across functions, quality issues are attacked in teams. "Teams" are *not* your familiar committees; they are "self-directed work groups" with their own required competencies and protocols. Unlike committees, teams aren't "representative": they bring together most or all of the people who work in a process to work on its improvement — no others need apply. TQM wants all persons to share responsibility for the processes they work in and for the whole; it believes in the superiority of collaborative work that achieves "team learning."

9. ***Empowering people.*** In Deming's view, 85 percent of all problems are traceable to the process itself, just 15 percent to the people in them. Stop attacking people, he admonishes managers, look to your systems: "Drive out fear from the workplace!" Patrick Townsend says management must "believe that its personnel department has been in the habit of hiring adults"; TQM "empowers" people "by trusting all employees . . . to act responsibly and giving them appropriate authority." People *want* to do the right and better thing, TQM urges, they *want* pride in their work; the task of managers is to remove the system barriers that prevent people from doing so. Who, in TQM, reviews work processes? Again, not distant managers or external evaluators but the people closest to the processes, those who do the work itself.

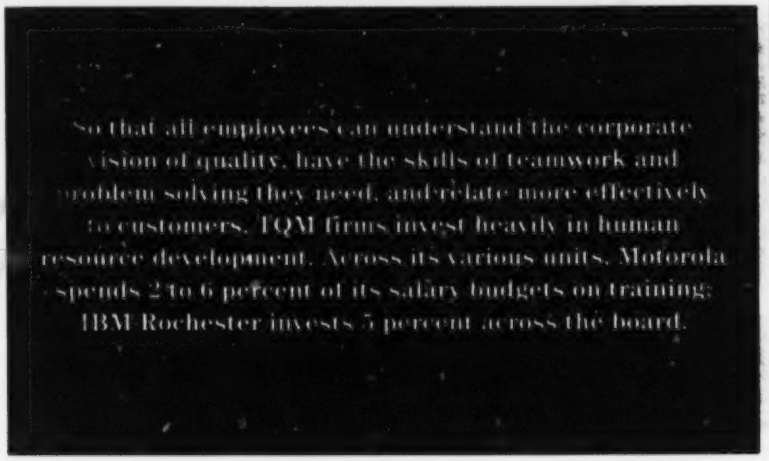
> Looking at TQM as a phenomenon, it is a call to leadership for the reform of American enterprise. Its advocates want more than a change in management practices; they want an entirely new organization, one whose culture is quality driven, customer oriented, marked by teamwork, and avid about improvement.

10. ***Training and recognition.*** So that all employees can understand the corporate vision of quality, have the skills of teamwork and problem solving they need, and relate more effectively to customers, TQM firms invest heavily in human resource development. Across its various units, Motorola spends 2 to 6 percent of its salary budgets on training; IBM-Rochester invests 5 percent across the board. Personnel systems in TQM companies rely less on incentives and rewards directed at the individual than on team-oriented "recognition, honors, and celebration."

11. ***Vision.*** The TQM world wants stripped-down, plain-English statements of the organization's core values, and it wants these "vision statements" a clear part of every employee's work. A story is told: When Tylenol was recalled a few years back, it wasn't an act of J&J's top management . . . a third-line manager learned of the peril and, with specific reference to J&J's values statement, recalled the prod-

uct on his own authority. Unlike the lofty piffle of "mission" statements, TQM urges compelling, down-to-earth language that gets all parties focused on the right thing to do.

12. ***Leadership.*** To achieve all the above, TQM partisans want fewer managers, at least of the old type — powerful figures in sole command of vertical authority structures. Instead, they want leaders, and of a new type — vision-givers, listeners, team-workers, committed to quality and customer needs, avid but patient for long-term ends, orchestrators and enablers of people-driven improvement. Lehigh University president Peter Likins puts this change more simply: ". . . we'll need to talk to each other more and control one another less."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The book I found TQM practitioners reading last summer was Peter Senge's *The Fifth Discipline* (Doubleday, 1990). In it, Senge (of MIT) describes the "ensemble of disciplines" that lie behind an organizational capacity for innovation: systems thinking, personal mastery, mental models, shared vision, and team learning. Senge barely mentions TQM, even as his "disciplines" capture the movement's values.

Still Not Sure?

Did I return from Los Angeles a convert? Not exactly. But I heard, on reflection, a lot of good answers to the objections I came with.

"Students aren't customers!" A "student as customer" analogy, for sure, falls well short of full description; students are important agents for their own learning, indeed the creators of it. All that said, the customer analogy — taken as an attempt to understand the experience of college from a student point of view — should hardly be taken as alien; it provides a useful lens for introspection and improvement. Want to improve registration or a chemistry major or library services? Why not talk with students?

TQM, importantly, does not imply pandering to student satisfaction or every short-term expression of needs. Faculties do well to weigh student views alongside their own professional judgment about the requirements of learning, of society, of future employers, and of a student's own longer-term interests. Some TQM educators entertain a responsibilities-oriented "student as worker" theme.

"We already talk with our students." Let us hope. The objection misses, however, what TQM wants: systematic, across-the-board listening, based on notions of customer importance. But as Kansas business professor Larry Sherr told an AIR audience recently, ". . . very few of our institutions have any idea even of who their customers *are*."

Customer analysis is one of TQM's fresh ideas, and it doesn't begin or end with students. Indeed, the prime "customer" of most administrative offices turns out to be . . . other administrative offices. While the end-point customer counts (a lot), more often the customer at hand is the in-house individual or unit to whom you supply products, a service, or information; the goal is for the work of each office to meet or exceed the expectations of its internal customers. Thinking in such terms tends to raise a host of new questions for collegiate TQM project teams.

It follows also that each person and unit has *suppliers*, most of them internal, on whom it relies for its work. "How can we be partners in quality-improvement work?" TQM would have teams ask one another.

"Oh, that language!" There are, let it be said, more-technical versions of TQM than I've recounted here; an engineer or statistician's view of the thing would whip you quickly into an exotic world of Pareto charts, cause-and-effect ("fishbone") diagrams, and "Plan, Do, Check, Act" schemes. Initial presentations of TQM to faculty-staff audiences at Wisconsin and Maryland faltered when just such versions were paraded forth . . . reminding one of assessment's rocky road to faculty understanding when first versions of it were presented by psychometricians.

But, just as with assessment, there are plain-English, larger-picture versions of TQM that can make sense to academic ears. Viewed broadly, TQM is a call to quality and a mindset about improvement; it values data, teams, and process; for the many faculty and staff of an institution, it offers respect and a voice. As for its special tools and vocabularies, they come second and are for adaptive use.

"It's okay for corporations, but. . . ." In a recent TQM newsletter, Ellen Chaffee described her interview in Tokyo with Prof. Masao Kogure, a revered leader in the application of quality improvement to the service sector. Kogure told her that every time TQM came to a new industry in Japan it encountered resistance: "We're not like the industry that is already using it."

Pondering Kogure's words, then higher education's special history and character, I came to wonder how different many of our functions really were from those in business — generating a bill, advising a student or client . . . if hospital TQM programs can teach doctors to introduce themselves to patients and listen to their questions, might there not be *something* here for us? Rutgers biologist Lion Gardner

phoned in October to tell me of his own new interest in the topic: "We have to do something with the hard, alienating structures of the university," he told me; "TQM is relevant for its humanistic thrust."

"It's okay for administrators, but. . . ." Most faculty members wouldn't mind at all if their institution's administrators used TQM (or anything else) to get a better act together. Indeed, we've all seen and come to appreciate the new customer orientation and service ethic in certain hotel chains, department stores, car-rental companies, and so on, and no doubt wondered why these new standards for service stopped at the campus gate. TQM, its early practitioners have found, finds many targets of opportunity in collegiate administration.

In that sense, its academic applications are, well, academic; let TQM be for administrators. Faculty have their own, more apt set of questions in assessment (which also is about quality, listening to students, and continuous improvement). Winona's Darrell Krueger, for years a national leader in the uses of assessment for academic improvement, is enthusiastic about TQM's arrival on the administrative side: "It brings the whole rest of the university into the quality quest."

Does TQM, though, have anything to contribute on the academic side? I think it might, especially to improving aspects of a department's services and to helping it to a keener sense of who its customers and suppliers are. Also, though most of the early collegiate adopters of TQM have left the academic side alone, a few have used the emphasis to encourage faculty to try the assessment-like techniques of Classroom Research — certainly a plus.

Does TQM have anything to add to assessment itself? Again I think it might. Pat Hutchings and Peter Ewell three years ago taught assessors the importance of getting "behind outcomes," of understanding the crucial processes of learning that contribute to outcomes . . . the process-analysis approaches of TQM are more than a bit suggestive here. Also suggestive is the TQM concept of "benchmarking," which insists that an organization intent on improving quality compare its performance not with industrywide averages but with a corporate "best of class." In educational testing, for example, this might imply comparing student performance not against local norms but against "high, international standards" (as the new National Education Goals will do).

"None of this is new . . . it's just good management." A quick way to dismiss TQM — business professors do this — is to resort to the above, a truism. Indeed, as mentioned earlier, TQM itself is an amalgam of ideas and tools, many of which have been around for quite some time — which is not to say they've been much used. And on most campuses, let it be noted, one will find offices and departments that seem perfectly well managed without the grace of TQM. But there are plenty more that aren't, that could sorely use the bursts of insight and energy TQM seems to bring.

"Here we go with another fad." Those of us who've been around long enough have sharp memories of earlier management nostrums — MBO, zero-based budgeting, endless planning schemes. Typically these arrive at higher education's doorstep five years after their trial in business, often just as corporations are discarding them. Let the record here note that first grumblings about TQM have started to appear in the business press, and that one of TQM's star companies — Florida Power and Light, a winner of Japan's Deming Prize, no less — has taken recent steps to deemphasize it.

It's easy to cry "fad," though, and miss the real article — as we saw with assessment. Two management "fads," in my memory, proved valuable and stuck: marketing in the late 1970s, strategic planning in the mid-1980s. They stuck, Michigan's Marvin Peterson reminded me, because they seemed to speak to an environmental need, they found their guru (Kotler, Keller), and they proved adaptable. TQM has yet to find its collegiate guru, but the first and third of the conditions do apply. Given the doldrums many college administrations find themselves in today, maybe it's time for the next "fad" to step up and find its uses.

The Early Adapters

At and since Los Angeles, I've tried to keep track of TQM's campus parties of interest. My best sense is that the number of individuals devoted to the topic runs well up in the hundreds, the number of institutions trying TQM in particular offices might be near one hundred, the number of those that have committed to TQM on an institutionwide basis stands at two dozen, of which the number with deeper experience constitutes a mere handful.

An intriguing observation is that most of the early innovators are from just two institutional types: either prominent research universities or *un*prominent (up to now) community colleges. Among the former are Oregon State, Wisconsin, Penn, and Colorado State, followed by Harvard, Carnegie Mellon, Maryland, Lehigh, Chicago, Minnesota,

Hoshin Planning

TQM far from ignores "outcomes" (recall "fitness for use") or "inputs" (good design, work with suppliers); but its distinctive contributions center on organizational processes. It's not that process is more important than input or outcome, simply a judgment about where new effort should best be focused. "The crux of the thing is that it forces us to pay attention to a lot of daily processes we've typically ignored," Carnegie Mellon's Richard Cyert told the Los Angeles conference.

What about planning, then? TQM practitioners in Japan evolved their own version of what Americans know as strategic planning, called *Hoshin*, or "breakthrough," Planning. It starts, as you'd expect, with a "vision statement," typically for the next five years. This is followed by goals (which have a customer orientation), work plans (for specific critical processes), deployment and execution, followed by monthly "audits" to monitor progress toward the vision. An important feature in Hoshin is the identification of no more than four "breakthroughs" (fundamental quality improvements), items that all units in the organization will specially pursue in a given time frame.

Hoshin practitioners have developed their own set of planning tools (the matrix and affinity diagrams, for example). They're also prone to put value statements in plans, as a reminder that how things are done can be as important as their direction. In American higher education, at least two institutions — Oregon State and Delaware County C.C. — have used Hoshin Planning.

Wyoming, Clemson, Georgia Tech, and Miami. Interestingly, the TQM initiator in many universities has been the president — several of these presidents have technical or business backgrounds, so they can't help knowing of TQM. Sometimes pressure for TQM adoption comes from community or alumni friends; Ford's Donald Peterson happens to be Oregon State's best-known alum, as Lee Iacocca is Lehigh's. The Lehigh Valley area, not incidently, is a hotbed of TQM interest; so is the city of Madison, a fact not unrelated to Wisconsin's decision to hire that city's TQM manager as its own in-house facilitator.

Among the two-year colleges, community relatedness and expectation have also clearly played a role in spurring TQM adoption. Within the sector, Fox Valley Technical College (WI) and Delaware County C.C. (PA) are the leaders, having each been at this since 1985; Houston (TX), Jackson (MI), and Lamar (CO) are among the recent adopters. Fox Valley has an especially beguiling story to tell: As it drove TQM concepts deeper and deeper into the institution, it began to reap high, measurable returns in morale, cost reduction, student attainment, and community approbation. As a result, it has become a Mecca of sorts for TQM initiates, the Alverno of the movement, with eighty colleges visiting last year and a new Quality Institute offering publications, training materials, consultation, and workshops (details from Callie Zilinsky at 414-735-5707).

Notably absent from TQM rosters are liberal arts colleges (Samford, Belmont, and Pepperdine come to mind as exceptions) and the regional publics (Winona, Towson, Northwest Missouri, Central Connecticut, and Arkansas Tech are active). North Dakota's board of higher education two years ago mandated TQM for the state's public colleges; last year, the Minnesota state university system adopted a TQM-derived "Q-7" program; both initiatives look to an enhancement of public confidence. Samford, a small Baptist university in Alabama, has built its interest in TQM on thoughtfully developed notions of Christian stewardship and collaboration.

Abroad, TQM is knocking at the door of higher institutions in the Netherlands and Australia; it's been a non-starter in Japan; in Britain, it's swept the polytechnic sector — Liverpool Polytechnic, for example, is as far along as Fox Valley.

Implementation Strategies

Anything as comprehensive as TQM, so sweeping in its reach (and claims), raises daunting prospects for the adopter. Deming was once asked how to implement his fourteen points. "What!" he huffed, "You want me to do your work for you?"

Nothing but admiration should go to the handful of institutions that have dug in and confronted the full TQM agenda — Fox Valley, Delaware County, and Samford, led by their presidents, have pursued nothing less than institutional transformation.

But many TQM advocates — administrative or faculty champions of the concept — confront difficult situations, which they were candid about in Los Angeles. Obstacle one is often the president — he's a loner, she doesn't trust teams, he relies on intuition (his own) over data, she could never be a provider of vision, and so on. Most administrative cabinets and staff are unpracticed at teamwork; powerful individuals and offices resist from sheer inertia. Very importantly, there's often no perceived external pressure to take up TQM or the concerns it addresses.

Books, Brains & Bucks

A huge literature has sprung up around TQM, as you'll see in the business section of any good bookstore. Many authors have their peculiar slant on the thing; more than a few **TQM books** are given over to exhortation and self-help. None of the masters — Deming, Juran, Crosby, Feigenbaum — has on the shelves today a "must read" book for TQM newcomers. Several practitioners recommend starting with journalist Mary Walton's *The Deming Management Method* (Putnam, 1986) or her *Deming Management at Work* (Putnam, 1990). I find in bibliographies at least five published papers on Deming's fourteen points applied to higher education; Tennessee's Trudy Banta heads a **FIPSE project** that will scrutinize corporate quality-improvement ideas for relevance to the academy.

On November 22, ACE/Macmillan releases the first book-length treatment of **TQM in the academy,** *On Q: Causing Quality in Higher Education,* by Daniel Seymour, a contributor to this *Bulletin* ($27.95; for a credit card order, phone 1-800-323-7445). Last month, the Jossey-Bass New Directions for Institutional Research series brought out *Total Quality Management in Higher Education,* edited by Lawrence Sherr and Deborah Teeter, seven good essays plus an annotated bibliography; order it for $13.95. The American Society for Quality Control (310 West Wisconsin Ave., Milwaukee, WI 53203) has a publishing and sales arm called Quality Press Publications that stocks most of the field's essential books, training materials, and so forth; write for a catalogue.

For a free copy of the **Baldrige Award application** guidelines, phone (301) 975-2036.

Most of the colleges and universities mentioned in this article have moved into TQM with a **corporate partner** — Winona State with IBM-Rochester, Oregon State with training from Hewlett-Packard, Fox Valley with Nashua Paper, and so on. Typically the consultation comes at little or no cost — TQM companies want to spread the gospel. Colleges warn not to rely on corporate people to sell a TQM vision internally; it's better to call them in to learn specific things like team building, statistical tools, or Hoshin.

Within the **consulting world,** a stand-out is the nonprofit GOAL/QPC of Methuen, Mass. Its early research focused on corporate implementation; later came work with hospitals and state and local governments; it now targets help for educators. It has useful publications, notably a 1989 research report (No. 89-10-03) on *Hoshin Planning: A Planning System for Implementing Total Quality Management* ($11.95 each). For information or publications, call (508) 685-3900.

TQM practitioners find one another at the "Role of Academia" conference described in this article, with the next scheduled for July at Lehigh; at the annual GOAL/QPC meeting in Boston, this November 11-13; at meetings of SCUP and AIR; and soon at AAHE **meetings,** including our National Conference next April 5-8 in Chicago and our Assessment Conference next June 21-24 in Miami Beach. People are also linked through a **newsletter,** with lists maintained by W.A. Golomski and Associates, 59 E. Van Buren St., Chicago, IL 60605-1220.

IBM announced October 1st a **major grants program** to promote TQM in colleges and universities — to teach, use, and do research on it. Eight $1 million awards will be made. For guidelines, write Director, Market-Driven Quality Management Systems, IBM Corporation, 208 Harbor Dr., Room 2C-09, Stamford, CT 06904-2501, or call (203) 973-7397.

In the circumstance, some converts have set out first to educate colleagues and build a critical mass of support for TQM; they've brought in speakers, engaged consultants, staged retreats. Oregon State began this way, in 1989, then was quickly able to implement a whole array of process-improvement projects, ten pilot teams at first, now fifty (the OSU work enjoys full presidential support and has a vice-presidential champion, the energetic Ed Coate). Other TQM advocates, however, have basically decided to ignore for now their president, the faculty, and other offices, to try TQM in their own units and attract attention through results.

Much of the early implementation of TQM falls in this latter category — that is, it is within-unit, addresses single functions, uses TQM techniques selectively, and begs (for now) larger change agendas. The Penn story is a good one here. Activity proceeded within the domain of a single (senior) vice president; a trainer was engaged (from the Juran Institute); criteria were developed for choice of projects; four were run in 1990-91, three of them successfully. One of the latter entailed reducing the cost of trash removal; another sought ways to ensure timely recovery of sponsored research funding (participants in the process uncovered, as they went along, lots of make-work, confusing forms, loose ends in existing procedures, *and* $1.7 million in billable charges!).

This sort of adaptive use of TQM, while it won't please the purists, seems the near-term future of the thing in most institutions. The stories here are compelling: the time spent in generating a student work-study check reduced from sixteen days to three (Kansas); the percentage of faculty grades handed in on time up from 30 percent to 98 percent (Connecticut College — which doesn't use TQM language); transcript-request time cut from ninety days to five (Samford); registration and course-availability "greatly improved" (Fordham's business school).

At Oregon State, Coate has already identified 250 internal processes potentially amenable to TQM analysis. Where do you start? According to Coate, "You look first for a screwed up process that's fixable, important to customers, and that can save you money." Penn's Quality Council looked for projects that were of manageable size, had campuswide visibility and impact, and that promised savings. "But if a unit is sick," Coate observes, "TQM can't cure it. In fact, it won't work. You'll need other remedies."

Is TQM a way to cut costs and save money? The party line is *no*; TQM is about quality and putting customers first, *after* which come the market and financial returns.

> My best sense is that the number of individuals devoted to the topic runs well up in the hundreds, the number of institutions trying TQM in particular offices might be near one hundred, the number of those that have committed to TQM on an institutionwide basis stands at two dozen, of which the number with deeper experience constitutes a mere handful.

But Coate's university faces major losses in state support; he feels forced to include in the process a hard look for cost savings, including personnel slots (captured by attrition).

Doubtless other institutions will skip Oregon State's careful groundwork and turn directly to TQM as a retrenchment tool, which would seem a mistake. "TQM is not instant pudding!" snorts Deming. Larry Sherr observes, "If resources are being used unwisely, they can't be found on the day you have to retrench." Fordham's Sylvia Westerman, a former NBC News executive, observes that "TQM absolutely can achieve efficiencies, raise morale, show good stewardship of funds, and win public trust. . . . but it's hard to make claims for cost-savings."

The Japanese experience and U.S. research show that it is only when firms attack cross-cutting functions (enrollment management, for example) that they realize major gains in effectiveness and cost-savings. But such functions prove very difficult to address, especially in a collegiate ethos of semi-autonomous units. Samford and UM-Duluth both report disappointment with first attempts at cross-functional projects; Delaware County, on the other hand, brought off a full-blown TQM review of its general-education program. TQM advisors with the Hospital Corporation of America recommend several years of work and learning with single-function projects (which Delaware County indeed had) before pursuing more ambitious targets.

Reflection

TQM doesn't speak to some of higher education's toughest problems (like working through the implications of multiculturalism); it is probably less profound a development than assessment (which speaks to the difficult, central issues of student learning); it won't rescue sagging public support or inept administrations; it might not save us any big sums of money.

It's unlikely, too, that TQM will sweep through our full 3,614 campuses soon — many just won't feel the customer or competitive pressure to undertake its difficult tasks. What I'd anticipate is the spread of TQM concepts, selectively deployed, across hundreds of institutions in the years ahead, with many of the resultant benefits and pitfalls described here and in Dan Seymour's article that follows.

The Chinese have an expression for "fad" that translates as "a gust of wind." It's been several years now since we've had a good gust of fresh ideas for college and university administration; TQM seems poised to provide just that. If TQM people will talk us into a greater interest in quality, customers, teamwork, and getting things right the first time, I'm ready to listen. ■